

NOTES AND DESCRIPTIONS OF MORDELLIDAE FROM  
THE SOLOMON ISLANDS  
(Coleoptera)

BY EUGENE RAY  
*Chicago, Illinois*

The following notes and descriptions were made from thirty-three specimens collected in the Solomon Islands by H. T. Padgen and R. A. Lever and sent to the writer by Sir Guy A. K. Marshall, Director of the Imperial Institute of Entomology, British Museum (Natural History). Seven species, including an unidentifiable one, are represented in this material. Of these two are known forms and four are described as new. The types of the new species are temporarily placed in the Field Museum of Natural History, Chicago, Illinois, while paratypes remain in the collection of Eugene Ray.

MORDELLA LOTTINI Boisduval

(Fig. 1)

*Mordella lottini*, Boisduval, 1835. Voy. Astrolabe 2:291.

One specimen: Tulagi, November 25, 1934 (H. T. Padgen). This species was originally described from the island of New Guinea and has since not been recorded elsewhere.

MORDELLA SALOMONENSIS Pic

(Fig. 2)

*Mordella salomonensis* Pic, 1929. Mel. Exot.-Ent. 54:22.

Two specimens: British Solomons, February, 1932, and Solomon Islands, 1934 (R. A. Lever). This is the first record subsequent to publication of the original description.

*Mordella subaenea* Ray, new species

(Figs. 3, 5, 6, 9)

Form slender, with the facies of a *Mordellistena*, sides distinctly curved throughout. Derm black, except for labrum, proximal segments of antennae, maxillary palpi, anterior femora and spurs of posterior tibiae, which are castaneous. Body densely covered

with fine, recumbent pubescence, partaking of ground color, except for the following albo-pubescent areas: head completely, pronotum with a thick line at base, broken at middle, scutellum completely, elytra with a pre-median rounded spot on disc of each, which in some specimens tends to extend obliquely toward humeri, a postmedian discal spot which varies from a rounded condition to a thick oblique one, meso- and metasternum and legs completely but less densely than on head, and basal margins of abdominal segments.

Antennae .9-1.1 mm. long, segment 2 shorter than 1, 2-3 equal in length, the former broader, 4-10 each two-thirds longer than 3, feebly serrate, 11 longer than 10 but narrower, sides and apex rounded. Terminal segment of maxillary palpi enlarged, with the form of a scalene triangle.

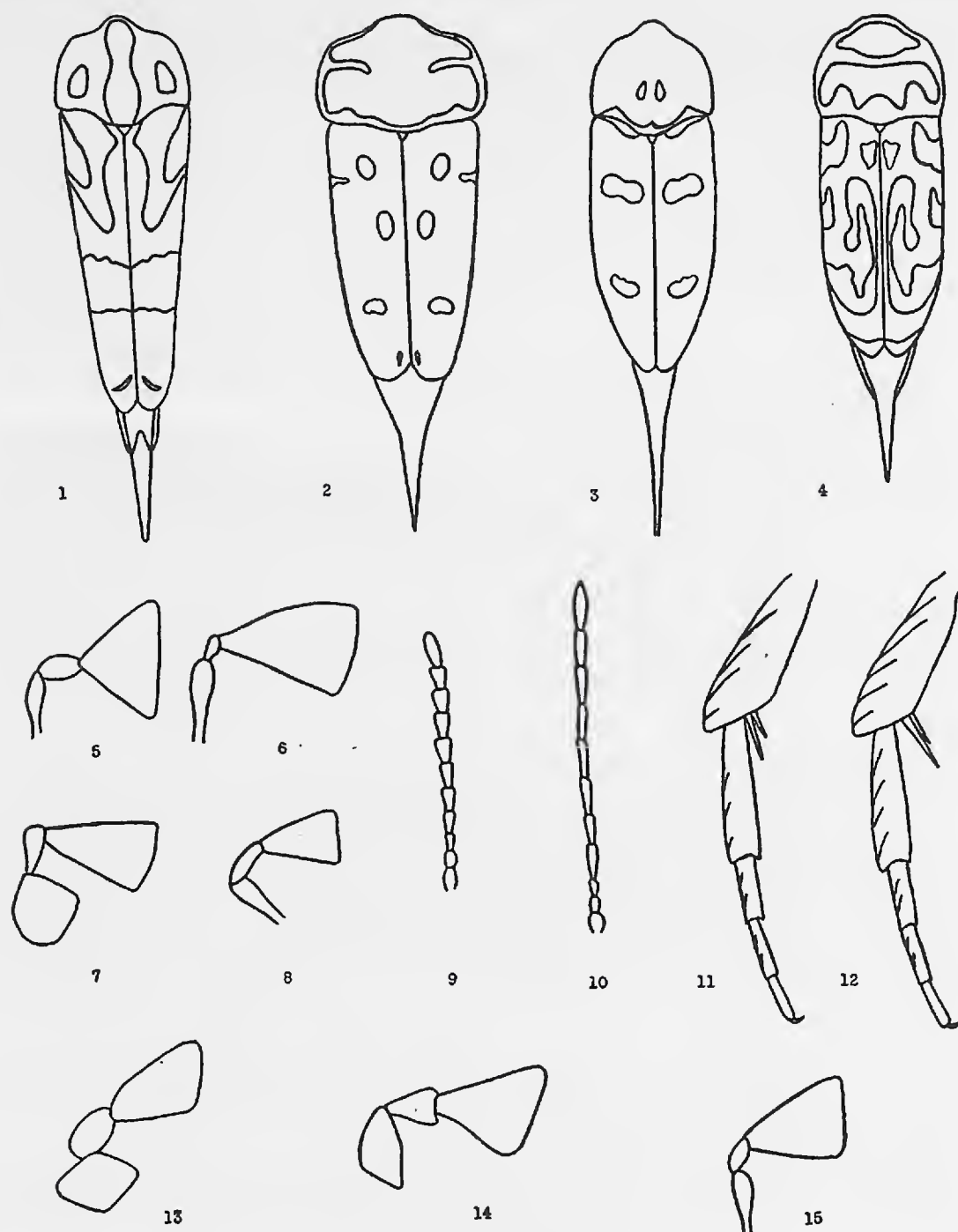
Pronotum broader than long (.76-1.25 x .6-.95 mm.), anterior margin and sides rounded, broadest before base, arcuate, midbasal lobe short, broad, subtruncate. Scutellum large, broadly triangular, sides and apex rounded.

Elytra but twice as long as broad (1.6-2.43 x .76-1.25 mm.), broadest near base, sides curved from the broadest point to apex, apices individually rounded. Anterior and intermediate tibiae equal to their tarsi in length, penultimate segments of the latter expanded, distal margins straight. Anal style robust, abruptly narrowed before middle, thence attenuate to apex, between 2.3 and 2.6 times length of apical ventral segment (.8-1.27 x .35-.48 mm.). Posterior tarsal claws with three teeth, two equal in size, one before, the other after the middle, the third one terminal.

Length: to apices of elytra, 2.2-3.38 mm.; to tip of anal style, 3-4.65 mm.

Ten specimens: Type, male, TULAGI Is., March 31, 1934, taken from low herbage on ridge (H. T. Padgen); a male paratype, type locality, November 25, 1934 (H. T. Padgen and R. A. Lever); three male and one female paratypes, GUADALCANAL LUNGA, February 27 and March 4, 1935 (R. A. Lever); one female paratype, MALAITA Is., August 16, 1934, "Su'u. banana leaf" (H. T. Padgen); one female paratype, VELLA LAVELLA Is., September 24, 1933, "Suantali-taro" (H. T. Padgen); one female paratype, ISABEL, January 28, 1936, "Gojururu" (R. A. Lever).

In Blair's key to the *Mordella* of the Fiji Islands (Ann. Mag. Nat. Hist. (9) 9, 1922, pp. 562-3) this species leads to *veitchi* Blair, but may easily be separated by the black anterior tibiae and tarsi, the reduction in the albo-pubescent areas on the pronotum and elytra, the longer third antennal segment, the shorter intermediate tarsi and the longer anal style.



## EXPLANATION OF PLATE

Fig. 1, Dorsum of *Mordella lottini* Boisduval. Fig. 2, Dorsum of *Mordella salomonensis* Pic. Fig. 3, Dorsum of *Mordella subaenea* Ray. Fig. 4, Dorsum of *Mordellistena oceanica* Ray. Fig. 5, Maxillary palpus of *Mordella subaenea* Ray (male). Fig. 6, Maxillary palpus of *Mordella subaenea* Ray (female). Fig. 7, Maxillary palpus of *Mordellistena oceanica* Ray (male). Fig. 8, Maxillary palpus of *Mordellistena oceanica* Ray (female). Fig. 9, Antenna of *Mordella subaenea* Ray. Fig. 10, Antenna of *Mordellistena abrupta* Ray. Fig. 11, Posterior tibia and tarsus of *Mordellistena abrupta* Ray. Fig. 12, Posterior tibia and tarsus of *Mordellistena abrupta* Ray. Fig. 13, Maxillary palpus of *Mordellistena abrupta* Ray. Fig. 14, Maxillary palpus of *Mordellistena maxillaris* Ray (male). Fig. 15, Maxillary palpus of *Mordellistena maxillaris* Ray (female).

**Mordellistena maxillaris** Ray, new species

(Figs. 12, 14, 15)

Form elongate-ovate, narrow, sides slightly curved, derm rufo-castaneous, legs and antennae lighter, maxillary palpi flavous, ridges of posterior legs black. Body densely covered with fine, recumbent golden pubescence, somewhat coarser on the venter than elsewhere.

Antennae 1.9 mm. long, slender, filiform, reaching beyond base of abdomen, segments 1-3 short, 2 and 3 each successively shorter than the preceding, 4 as long as 2 and 3 together, 4-10 elongate, each somewhat broader at apex than at base, 11 distinctly longer than 10, broadest before apex, sides strongly curved. Three distal segments of maxillary palpi enlarged and flattened in both sexes, terminal segment subquadrate in male and smaller than the isosceles-triangular segment in female; second segment greatly enlarged and bell-shaped in male, of normal size in female; third segment large in both sexes, ovate in male, quadrangular in female.

Pronotum broader than long (1.13 x .94 mm.), anterior margin and sides rounded, broadest before base, base arcuate, midbasal lobe short, broad, subtruncate. Scutellum large, broad, triangular, base concave, sides slightly convex.

Elytra more than three and one-half times as long as broad (2.7 x .7 mm.), broadest near base, curved from a postmedian point to apex, apices individually rounded. Anterior and intermediate tibiae longer than their tarsi, penultimate segment of the latter broadened at apex, its apical margin excised. Posterior tibiae with four equal, oblique, parallel ridges (excluding subapical one); basitarsi with four, second and third segments each with two ridges. Anal style slender, slightly curved ventrad, attenuate to apex, but twice length of apical ventral segment (1.4 x .65 mm.). Posterior tarsal claws with six teeth, the basal one before middle, others successively larger distad.

Length: to apices of elytra, 3.64 mm.; to tip of anal style, 5.04 mm.

Nine specimens: Type, male, two male and two female paratypes, TULAGI Is., October 29, 1934, on *Hibiscus* flower (R. A. Lever); one male paratype, GUADALCANAL, March 4, 1935 (R. J. Lever); two female paratypes, GUADALCANAL LUNGA, March 4, 1935 (R. A. Lever); one female paratype, TULAGI, December 10, 1934, in home (H. T. Padgen).

This species is closely allied to the group that includes the Fijian *Mordellistena dodoneae* (Montoruzier) and *M. consimilis* Blair. It is similar in general appearance, but differs in its larger



size, the shorter second and third segments of the antennae and the additional oblique ridge of the posterior basitarsi. No mention is made of peculiarities of the maxillary palpi in the literature pertaining to these allied species and it is thus assumed that the palpi are of normal form. The writer has received word that, of the species sent for study, none can be identified with forms described by Blair and others in the collection of the British Museum and it is therefore assumed that additional, undescribed differences exist.

***Mordellistena abrupta* Ray, new species**

(Figs. 10, 11, 13)

Form elongate-ovate, narrow, slightly but distinctly curved. Derm fusco-castaneous, legs, antennae and mouth parts castaneous, ridges of posterior legs black. Body densely covered with fine, recumbent pubescence, partaking of ground color and distributed equally finely over entire surface.

Antennae 1.6 mm. long, slender, filiform, reaching distal abdominal segment, segments 2-3 short, together equal in length to 4, 4-10 equal in length, but becoming successively narrower distad, 11 distinctly longer than 10, broadest beyond middle, sides strongly curved. Three distal segments of maxillary palpi enlarged, flattened, terminal and penultimate segments subquadrate, the former much the larger of the two, antepenultimate segment almost as large as terminal one, subtriangular.

Pronotum distinctly broader than long (1.13 x .94 mm.), anterior margin and sides rounded, broadest before base, base arcuate, midbasal lobe short, broad, subtruncate. Scutellum large, broad, base concave, sides slightly convex.

Elytra narrow, more than three times as long as broad (2.2 x .7 mm.), broadest near base, curved from a postmedian point to apex, apices individually rounded. Anterior and intermediate tibiae longer than their tarsi, penultimate segment of the latter broadened at apex, its apical margin excised. Posterior tibiae with three, equal, oblique, parallel ridges (excluding subapical one); basitarsi with three, second and third segments each with two ridges. Anal style slender, slightly curved ventrad, attenuate to apex, almost three times length of apical ventral segment (.95 x .35 mm.); posterior tarsal claws with four teeth, the basal one postmedian, others successively large distad.

Length. to apices of elytra, 3.14 mm.; to tip of anal style, 4.09 mm.

One specimen: Type, male, GUADALCANAL LUNGA, March 4, 1935 (R. A. Lever).

This species is most closely allied to *maxillaris*, new species, described above, but may be separated by its darker color, smaller size, and differences in the ridges of the posterior legs, the peculiar maxillary palpi, and in the tarsal claws with a smaller number of teeth. From *consimilis* Blair it may be separated by its larger size, longer antennae and the shorter tibial ridges, in addition to the peculiar maxillary palpi. When the female of this species is found it seems probable that sexual differences in the shape of the maxillary palpi will be found to exist.

***Mordellistena oceanica* Ray, new species**

(Figs. 4, 7, 8)

Form elongate, sides subparallel, derm generally black, with the following exceptions: front and clypeus castaneous, sides of pronotum broadly rufo-castaneous, connected by a narrow, subapical, transverse band (only in male!); legs flavocastaneous; tibiae and femora of hind pair darker. Body densely covered with fine, recumbent pubescence, generally partaking of ground color, except on venter, where it is whitish, and on pronotum and elytra, where it is condensed to form whitish bands, as follows. on pronotum, a thick, premedian line curved anteriorly to meet the anterior angles and extending along sides to base, a line along base with three short vittae extending into disc; scutellum entirely; elytra with a curved band surrounding humeri, a short, subbasal, subsutural line curving inward to meet scutellar area; a median area formed like an M, but broken at suture; a small, circular area lateral to the previous one; a postmedian, inverted, M-shaped area, reaching lateral margins, but broken at suture; and a short, transverse, apical area.

Antennae 1 mm. long, elongate, narrow, filiform, reaching mesosternum; 4 one-third longer than 3; 5-10 each as long as 3 and 4 together; 11 distinctly longer than 10, sides curved, one distinctly convex, the other almost straight, broadest premedially. Terminal segment of maxillary palpi enlarged, with the form of an isosceles triangle, distal margin transverse, straight.

Pronotum distinctly broader than long (.8-.65 mm.), anterior margin and sides rounded, base arcuate, midbasal lobe short, broad, rounded. Scutellum broad, rounded-triangular.

Elytra two and two-third times as long as broad (2.35 x .8 mm.), sides gently curved from base to postmedian point, thence strongly curved to apex, apices individually rounded. Anterior and intermediate tarsi longer than their tibiae. Posterior tibiae with three strong, equal, parallel ridges (excluding subapical one);

basitarsi with three, second and third segments with two ridges each. Anal style almost three times length of apical ventral segment (1.2 x .45 mm.), attenuate to apex, slightly curved ventrad.

Length: to apices of elytra, 3 mm.; to tip of anal style, 4.2 mm.

Five specimens: Type, male, a male paratype and two female paratypes, GUADALCANAL BERANDE, August 27, 1934 (H. T. Padgen); one female paratype, same locality, August 26, 1934, on wild fig (H. T. Padgen).

This species belongs to the same group as the previous two species, but may easily be separated by the difference in the relative lengths of the antennal segments, the striking pattern of pubescent markings on the pronotum and elytra and the smaller size.

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## PREY OF THE ROBBER FLY CALLINICUS CALCANEUS LOEW

(Diptera: Asilidae)

BY E. GORTON LINSLEY

*University of California, Berkeley*

In May, 1942, near Oakhurst, Madera County, California, the writer had several opportunities to examine the insects captured by *Callinicus calcaneus* Loew. In this area the species was flying about over a hillside covered with mountain mizery, *Chamaebatia foliolosa* Benth., and was apparently preying almost entirely upon bees which were visiting the blossoms of this plant. Twenty-two specimens of the robber fly were captured with their prey. The prey consisted entirely of megachilid and andrenid bees as follows:

Species	Specimens
<i>Osmia brevis</i> Cresson . . . .	9
<i>Osmia cara</i> Cockerell . . . .	5
<i>Osmia densa pogonigera</i> Cockerell .	1
<i>Osmia lignaria</i> Say . . . .	1
<i>Andrena auricoma</i> Smith . . . .	3
<i>Andrena angustitarsata</i> Viereck . .	1
<i>Andrena carliniformis</i> Cockerell . .	1
<i>Andrena saccata</i> Viereck . . . .	1